

Missouri Action Plan

Chronic Disease Prevention and Management: Moving Upstream



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NATIONAL GOVERNOR'S ASSOCIATION POLICY ACADEMY ON CHRONIC DISEASE PREVENTION AND MANAGEMENT

Missouri's Academy Team Members:

Patrick Lynn, Senior Policy Advisor
Office of the Governor

Connie Johnson, Representative
Missouri House of Representatives

Vicky Riback Wilson, Representative
Missouri House of Representatives

Betty Sims, Senator
Missouri State Senate

Marvin Singleton, MD, Senator
Missouri State Senate

Tricia Schlechte, Deputy Director
Missouri Department of Health & Senior Services

Bernard Malone, Director
Division of Chronic Disease Prevention and Health
Promotion, Missouri Department of Health & Senior Services

Deborah Markenson, Deputy Director
Division of Chronic Disease Prevention and Health Promotion,
Missouri Department of Health & Senior Services

Sherri Homan, Assistant to Director
Division of Chronic Disease Prevention and Health
Promotion, Missouri Department of Health & Senior Services

Greg Vadner, Director
Division of Medical Services, Missouri Department of
Social Services

Ginger Steinmetz, Government Relations Consultant
American Lung Association of Eastern Missouri

Lynne Schlosser, Director, Government Relations
American Cancer Society



*"If we are not working on
chronic diseases,
responsible for two-thirds
of deaths in the United
States, then we are
working in the margins."*

Dr. Jim Marks, Director, National
Center for Chronic Disease
Prevention and Health Promotion,
Centers for Disease Control and
Prevention

For more information:

Missouri Department of Health and Senior Services

Division of Chronic Disease Prevention and

Health Promotion

920 Wildwood Drive, P.O. Box 570

Jefferson City, MO 65102-0570

(573) 522-2800

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EXECUTIVE SUMMARY

The National Governor's Association (NGA) and the Centers for Disease Control and Prevention (CDC) in collaboration with the Association of State and Territorial Health Officials and the National Conference of State Legislatures sponsored a national Policy Academy on Chronic Disease Prevention and Management in August 2002. Through a competitive process, Missouri's application was selected for its team to participate.

The overarching goal of the Academy was for each state to develop and implement an action plan on a policy initiative to improve chronic disease prevention and management within their state. This document outlines Missouri's Action Plan.

Chronic diseases are a major health issue in Missouri with five chronic diseases (i.e., heart disease, cancer, stroke, chronic lower respiratory diseases and diabetes) accounting for 7 of every 10 deaths annually. Although mortality rates for heart disease and cancer have improved, Missouri's rates from these two diseases as well as stroke and chronic lower respiratory diseases remain higher than the national average.

Other chronic conditions such as asthma, arthritis and osteoporosis result in years of illness, lost productivity and secondary complications. Much of the illness, disability, and premature death associated with chronic diseases is avoidable through known prevention and management measures.

Chronic diseases are costly. In Missouri, direct medical care costs for chronic diseases are estimated to have reached \$9.5 billion in 1995. Additional indirect costs (e.g., loss of work, disability aids, years of potential life lost, and other costs) drive the costs even higher. A major cost component to chronic disease is tobacco-caused expenditures. In 1998, Missouri's medical costs related to smoking were about \$1.66 billion with the Medicaid portion being over \$415 million. These costs contribute substantially to Missouri's Medicaid budget being the second largest spending item in the state's budget.

The health and economic problems stemming from chronic disease in Missouri make it critical that the state look at effective initiatives and strategies for improving outcomes. Overall, Missouri's framework to decrease chronic diseases focuses on reducing key risk factors, increasing preventive practices, improving chronic care management and enhancing state policies by moving to more upstream intervention approaches (Appendix 1).

Missouri's Academy team assembled representation from the Governor's Office, General Assembly, Missouri Department of Health and Senior Services (DHSS), Medicaid, American Cancer Society (ACS) and American Lung Association (ALA). This distinctive group brought varied perspectives to the planning and commitment to the following key actions:

- Raise awareness about the importance of prevention. Enlist the Governor's and First Lady's support to prompt Missourians to follow healthy behaviors, receive appropriate health screenings and seek medical care.

- Enhance efforts with statewide partners to decrease tobacco use, improve healthy eating and increase physical activity.

- Improve health care system policies to provide better chronic disease care management.

This document provides action steps for the team and focuses efforts toward the critical area of prevention. It is intended that this document will mesh with existing plans and trigger creation and adoption of broad-based plans to form comprehensive interventions and components to reduce chronic disease. Comprehensive approaches involve multiple risk factors, strategies and settings in order to increase the effectiveness of any single action. Finally, this plan is meant to define unifying steps for the Governor, elected officials, state agencies and partner organizations to collectively address problems resulting from chronic disease. By concentrating our efforts and pooling our resources today, Missourians can lead healthier, more productive lives tomorrow.

Missouri's Vision and Guiding Principles



The following vision was developed by Missouri's Academy Team and represents the future for Missouri that we are striving toward:

Vision

We envision a healthy Missouri where every resident is able to learn, work, and enjoy life; where individuals, families, and communities practice healthy behaviors; where all sectors of society work together to create an environment that supports disease prevention and individual well-being; where interventions are effective; policies are based on sound research; and treatment is available, accessible, affordable, and timely.

The following guiding principles along with the vision statement represented the foundation that guided decisions and served as the reference point for developing our priorities and strategies:

Guiding Principles

1. Focus on disparate populations and those most vulnerable;
2. Recognize that resources are finite—work collaboratively to maximize and redirect existing resources. Secure federal and private funds to help support plan;
3. Create widespread awareness regarding the value of prevention and move to upstream, evidence-based approaches; and
4. Take on leadership role for the effort.





Chronic diseases take an enormous toll on the health and well-being of individuals. They are among the most prevalent, costly and preventable health problems. In addition, chronic diseases cause major limitations in daily living for more than 1 of every 10 Americans and collectively account for 75% of the nation's \$1 trillion spent on health care each year.

Many chronic diseases and conditions share the same risk factors. Further, certain chronic diseases such as diabetes increase the risk for other chronic illnesses such as cardiovascular disease. While the impact of chronic diseases is great, the loss of life and incapacitation caused by these diseases have broad implications for quality of life, workforce participation and economic productivity of individuals and society.

Recognizing the magnitude of the problems stemming from chronic diseases and the advancing science and practice related to chronic disease prevention and management that provide valuable tools for reducing the impact of these diseases, NGA and its partners decided it was time to bring national attention to these issues.

Unfortunately, the number of Missourians suffering with chronic diseases and conditions is on the rise largely due to the high prevalence of risk factors (see Appendix II). Chronic conditions often disproportionately affect certain population groups including low-income and racial/ethnic minority groups. In addition, Missourians are getting older. Because chronic diseases affect the population at large in such significant numbers and are expected to increase with an aging population, the economic cost will also continue to increase—unless there is intervention.

NGA's Policy Academy on Chronic Disease Prevention and Management offers states on-going technical assistance with developing and implement

Background

ing strategies for preventing and managing chronic disease. Combining multiple strategies, particularly cutting edge policy initiatives, across various settings increase the effectiveness of interventions in promoting health and preventing diseases.

As state leaders, governors and state legislators have unique roles in implementing strategies to mitigate the personal suffering and financial burdens of chronic diseases. Governors and state leaders can play a vital role in raising the awareness and bringing attention to chronic diseases. They can take an active role in educating the public on the risk and burden of chronic diseases and prompt citizens to evaluate their lifestyles, seek care and have risk factors examined by their health care providers. In addition, they are in key positions to establish policies and direct resources to reduce the burden imposed by chronic disease.

At the Policy Academy, there were unique opportunities to interact with national experts and other states and territory personnel. It is clear that there are major reforms and innovative strategies, such as consolidated state health insurance purchasing being launched to develop funding, programs and policies for preventing and mitigating the impact of chronic diseases. Some of these approaches initially being incorporated in Missouri's Plan include:

- ✓ Conducting public information campaigns to increase prevention and healthy lifestyles.
- ✓ Expanding the current acute-care focused health system to include the *Chronic Care Model*. The hallmarks of this model are access to key services, increased self-management, evidence-based care, informed and involved patients, prepared and proactive practice teams and productive interactions between the patient and health care provider teams which leads to improved outcomes.
- ✓ Further exploring the impact of chronic diseases on state resources and the application of incentives/disincentives to reduce risk factors.



Priorities

Directing scarce resources to maximize the health benefit for an entire community or population is critical in today's shrinking economy. The Missouri Department of Health and Senior Services analyzed data on 52 significant diseases and conditions and ranked them based on contribution to the health burden in Missouri. Specifically, disease and health conditions were ranked based on:

Magnitude—number of emergency room visits and hospitalizations

Severity—number of deaths and the number of deaths occurring under age 65

Urgency—the trend in the death rate from 1992 to 1998

From this model, the following 17 diseases and conditions were identified as top priority:

<u>Ranking</u>	<u>Disease/Condition</u>	<u>Ranking</u>	<u>Disease Condition</u>
1	Chronic Obstructive Pulmonary Disease (COPD)	11	Senility
2	Diabetes	12	Falls
3	Motor vehicle injuries	13	Alcohol-related
4	Stroke	14	Asthma
5	Heart Disease	15	Arthritis
6	Pneumonia & Influenza	16	Prostate cancer
7	Substance use-related (e.g., illegal drugs)	17	Low-birth-weight, birth defects,
8	Lung cancer		Sudden infant death syndrome
9	Suicide attempts		
10	Assaults (homicide)		

In order to inform the Academy Team's priorities for this plan, the top diseases and conditions were reviewed. Based on the priority diseases and conditions identified and determinations of common risk factors that contribute to the chronic disease problems, the following priority areas were selected for action:

- Decrease prevalence of health risk factors
 - ⇒ Tobacco Use
 - ⇒ Physical inactivity
 - ⇒ Poor eating habits
- Improve health care system policies with focus on preventive services and better chronic care management
- Improve state policies, regulations and statutes that would improve health outcomes

The most recent Missouri data and targets related to these priorities are shown in Appendix III and IV.



Public Policy Approaches

There is a substantial imbalance of investments in medical care compared with prevention activities in Missouri. As part of the Missouri Show Me Results initiative, a chronic disease prevention assessment was completed across seven state agencies with the goal of determining activities and resources being devoted toward the prevention of chronic diseases. The assessment focused on the four primary risk factors of tobacco use, low consumption of fruits and vegetables, physical inactivity and obesity. When the fiscal year 1999 budgets were combined for chronic disease programs, the total was slightly more than \$4 billion. However, upon further analysis it was determined that 95% of this total was being devoted for alcohol/substance abuse, disease management, psychiatric services and access to care, with just 5% allocated to population-wide approaches for health improvement. In other words, Missouri is spending the majority of its chronic disease funds to care for individuals once the disease or condition has occurred versus preventing the occurrence of disease.

While medical care is an important component of our health experience, it is only one component. The health of a population is the product of several interacting influences including genetics, social situation, environmental conditions, behavioral choices and medical care. However, it has been known for quite some time that medical care has had a limited impact on the health of populations. In fact, only about 10-15% of preventable deaths in the United States could be avoided by better availability or quality of medical care but about 40% of these deaths could be avoided by reducing risk factors through preventive interventions. Therefore, to substantially impact the health of Missourians will require more balanced spending between prevention and care. There is mounting evidence that upstream approaches or population and system approaches such as policy strategies can be very effective in promoting and maintaining health, particularly as they relate to behavioral choices, social conditions and the physical environment (Appendix 1). After reviewing the evidence, the Academy Team is proposing the following chronic disease prevention policy interventions:

Public Policy Approaches

- Work to develop state and local policies that increase physical activity and healthy eating.
- Support state and local policies that reduce tobacco consumption and decrease the social acceptability of tobacco use.
- Explore policy modifications in Medicaid to implement and evaluate chronic care management.

Key Strategies to Support Policy Approaches

- Raise public awareness about healthy eating and being physically active to increase well-being and improve quality of life.
- Increase community planning, healthy community design and interventions to enhance recreational opportunities.
- Implement comprehensive tobacco use prevention program.
- Identify Medicaid population groups disproportionately affected by chronic diseases and collaborate with community-based organizations, voluntary organizations, state medical associations and public health groups to design methods to combat these effects.
- Enhance or establish new linkages across between agencies (e.g., social services, elementary and secondary education, conservation, natural resources, etc.) to mobilize efforts to prevent and decrease tobacco use, improve healthy eating and increase physical activity.



Priority Actions

Below are the action steps developed by Missouri's Chronic Disease Prevention Policy Academy Team. These key actions were developed to focus on prevention and health promotion and serve as a guide for the Governor, elected officials, state agencies and partner organizations to collectively address problems resulting from chronic disease.

Objectives	Key Strategies	Action Steps	Responsible Persons	Completion Timeframe	Outputs/ Outcomes
Increase awareness of the Governor, legislators and the public regarding chronic disease prevention.	<ul style="list-style-type: none"> • Enlist support of the Governor for the Missouri Action Plan. • Compile resource packet for legislators. 	<ul style="list-style-type: none"> • Present chronic disease and Missouri Action Plan information to Governor. • Develop news release—<i>Missouri Resolves to Prevent, Not Just Treat, Chronic Disease</i>. • Distribute Action Plan and resources to key legislators. • Develop quarterly progress reports and consultation with Governor's staff. 	<ul style="list-style-type: none"> • Presentation Missouri Policy Academy Team • News release Patrick Lynn • Resource packet DHSS staff with Governor's office • Progress reports Bert Malone 	<ul style="list-style-type: none"> • Presentation 10/22/02 • News release 10/25/02 • Resource packet 5/1/03 • Progress Reports July-Sept; Oct-Dec; Jan-Mar; Apr-June 	<p><i>Outputs-</i> Governor's guidance and support and completed progress reports.</p> <p><i>Outcomes-</i> Increased awareness and attention to chronic disease prevention.</p>
Decrease the prevalence of tobacco use among Missourians	<ul style="list-style-type: none"> • Engage in strategic planning with state agencies; professional groups; voluntary and advocacy associations and local public health agencies to establish and fund a comprehensive tobacco use prevention program in Missouri. 	<ul style="list-style-type: none"> • Develop comprehensive tobacco use prevention strategic plan • Develop operational plan and secure implementation funds 	<ul style="list-style-type: none"> • Tobacco Use Prevention Steering Committee, local partners, and consultants. • DHSS to finalize strategic plan and develop operational plan. 	<ul style="list-style-type: none"> • Strategic Plan 5/1/03 • Operational Plan 7/1/03 	<p><i>Outputs-</i> Plan that includes mobilization of communities, increasing public places that restrict smoking, increasing pro-health/tobacco prevention and cessation messages.</p> <p><i>Outcomes-</i> Decreased smoking; reduced tobacco related morbidity and mortality (COPD, CVD, Cancer, Diabetes); reduced expenditures.</p>



Priority Actions (continued)

Objectives	Key Strategies	Action Steps	Responsible Persons	Completion Timeframe	Outputs/ Outcomes
Increase awareness of healthy habits (e.g., healthy eating, physical activity, regular health exams and screenings) to prevent and effectively manage chronic disease.	<ul style="list-style-type: none"> Conduct public awareness campaign involving First Family. 	<ul style="list-style-type: none"> Identify key messages, priority populations and means to conduct. Implement awareness campaign. 	<ul style="list-style-type: none"> DHSS in collaboration with key partners, Governor's office and First Lady 	<ul style="list-style-type: none"> Key messages 5/1/03 Awareness campaign 6/1/03 	<p><i>Outputs</i>-Public information campaign supported by Governor's office and First Lady.</p> <p><i>Outcome</i>-Increased public awareness and adoption of healthy habits.</p>
Increase levels of physical activity of Missourians outside of regular work.	<ul style="list-style-type: none"> Enlist support of First Lady. Develop a state physical activity plan. Assist in the development, implementation and evaluation of a statewide physical activity initiative. 	<ul style="list-style-type: none"> Present Missouri Action Plan to First Lady. Convene a workgroup to develop a physical activity state plan. Work with the Governor's Council on Physical Fitness and other partners on the <i>Shape Up Missouri</i> initiative. 	<ul style="list-style-type: none"> Presentation Bert Malone Workgroup Janet Wilson Dale Brigham <i>Shape Up Missouri</i> DHSS representative 	<ul style="list-style-type: none"> Presentation 11/18/02 Physical Activity State Plan 5/1/03 <i>Shape Up Missouri</i> 10/1/03 	<p><i>Outputs</i>-First Lady's guidance and support, completion of a physical activity state plan and state-wide physical activity initiative.</p> <p><i>Outcomes</i>-Increased prevalence of physical activity.</p>
Increase linkages between Medicaid system and public health system to: <ul style="list-style-type: none"> improve chronic care management and determine chronic disease expenditures. 	<ul style="list-style-type: none"> Disseminate information regarding chronic disease standards of care, clinical guidelines and best practices. Partner with Medicaid, Center for Health Information Management and Evaluation (CHIME) and the Office of Epidemiology to conduct Medicaid chronic disease expenditure study. 	<ul style="list-style-type: none"> Gather and analyze data regarding chronic diseases among Medicaid populations. Assist in defining standards of care and indicators to improve and evaluate chronic care management. Develop plan, seek funding and conduct Medicaid chronic disease expenditure study. 	<ul style="list-style-type: none"> Data analyses and report generation DHSS staff Propose standards of care and indicators DHSS staff Medicaid chronic disease expenditure study DHSS staff 	<ul style="list-style-type: none"> Burden Report 9/1/03 Standards of care and evaluation indicators proposed 9/1/03 Expenditure Study 9/1/03 	<p><i>Outputs</i>-Burden of chronic disease among Medicaid populations report completed, coverage for preventive services initiated and chronic care management implemented.</p> <p><i>Outcomes</i>-Capped or reduced Medicaid costs, decreased chronic disease morbidity and decreased long-term care costs.</p>



Conclusion...

Missouri is fortunate to have been selected to participate in the NGA Policy Academy on Chronic Disease Prevention and Management. The Academy highlighted some new innovative long-term approaches to reducing chronic diseases such as consolidated state health insurance purchasing and reinforced the need for a greater emphasis on prevention, the use of evidence-based approaches, increasing individual self-management, policy and system approaches and chronic care improvement. Missouri has a strong commitment from many concerned policy makers, organizations and agencies to support efforts to reduce chronic diseases. The Missouri Department of Health and Senior Services intends to build upon current efforts and strong partnerships to address the impact of chronic diseases in Missouri. Continued leadership from state policy makers and community organizations as well as additional federal and private funding will be necessary to implement all of the activities in this plan but much can and will be done with existing resources. Missouri's Academy Team is committed to achieving its vision of a healthy Missouri where every resident is able to learn, work and enjoy life.

Data Sources

Behavioral Risk Factor Surveillance System (BRFSS), CDC.

Youth Risk Behavior Survey (YRBS), Missouri Department of Elementary and Secondary Education and CDC.

Missouri Information for Community Assessment (MICA), DHSS, Center for Health Information and Evaluation.

Missouri Diabetes Collaborative Summary Reports, DHSS, Missouri Diabetes Program.

Tobacco Consumption / Sales and Excise Tax, Missouri Department of Revenue.

References

Bradford, K. & Simoes, E. (2000). A model for prioritization of public health programs. Jefferson City, MO: DHSS, Office of Epidemiology.

Campaign for Tobacco-free Kids. (2002). The toll of tobacco in Missouri. [On-line]. Available: <http://www.tobaccofreekids.org/>

CDC. (1999). Best practices for comprehensive tobacco control program. Atlanta, GA: U.S. Department of Health and Human Services.

CDC. (2002). The burden of chronic diseases and their risk factors: National and state perspectives. Atlanta, GA: Department of Health & Human Services.

Dietz, W.H. (2002). Policy and environmental strategies to improve nutrition and physical activity. Presentation at the Policy Academy on Chronic Disease Prevention and Management, San Francisco, CA.

Feezor, A. (2002). Care management: Getting more miles to the gallon? Presentation at the Policy Academy on Chronic Disease Prevention and Management, San Francisco, CA.

Forsyth, L.H., & Marcus, B.H. (1999). How are we doing with physical activity? American Journal of Health Promotion, 14(2), 118-124.

Glanz, K. (1999). Progress in dietary behavior change. American Journal of Health Promotion, 14(2), 112-117.

Health Canada. (2001). Population health approach. [On-line]. Available: <http://www.hc-sc.gc.ca/hppb/phdd/approach/index.html/>

Miller, N., Simoes, E.J., & Chang, J. (1997). Smoking-attributable mortality in Missouri, 1995. Missouri Medicine, 11, 661-665.

Missouri Department of Health. (2001). The Missouri foundation for health. Jefferson City, MO.

McGinnis, J.M., Williams-Russo, P. & Knickman, J.R. (2002). The case for more active policy attention to health promotion. Health Affairs, 21, 78-93.

NGA Center for Best Practices. (2002). The obesity epidemic—How states can trim the “fat”. Issue Brief. Washington, DC: Health Policy Studies Division.

NGA Center for Best Practices. (2002). State efforts to prevent and manage diabetes. Issue Brief. Washington, DC: Health Policy Studies Division.

Orleans, C.T., & Cummings, K.M. (1999). Population-based tobacco control: Progress and prospects. American Journal of Health Promotion, 14(2), 83-91.

Task Force on Community Preventive Services. (2002). Task force recommendations. [On-line]. Available: <http://www.thecommunityguide.org/>

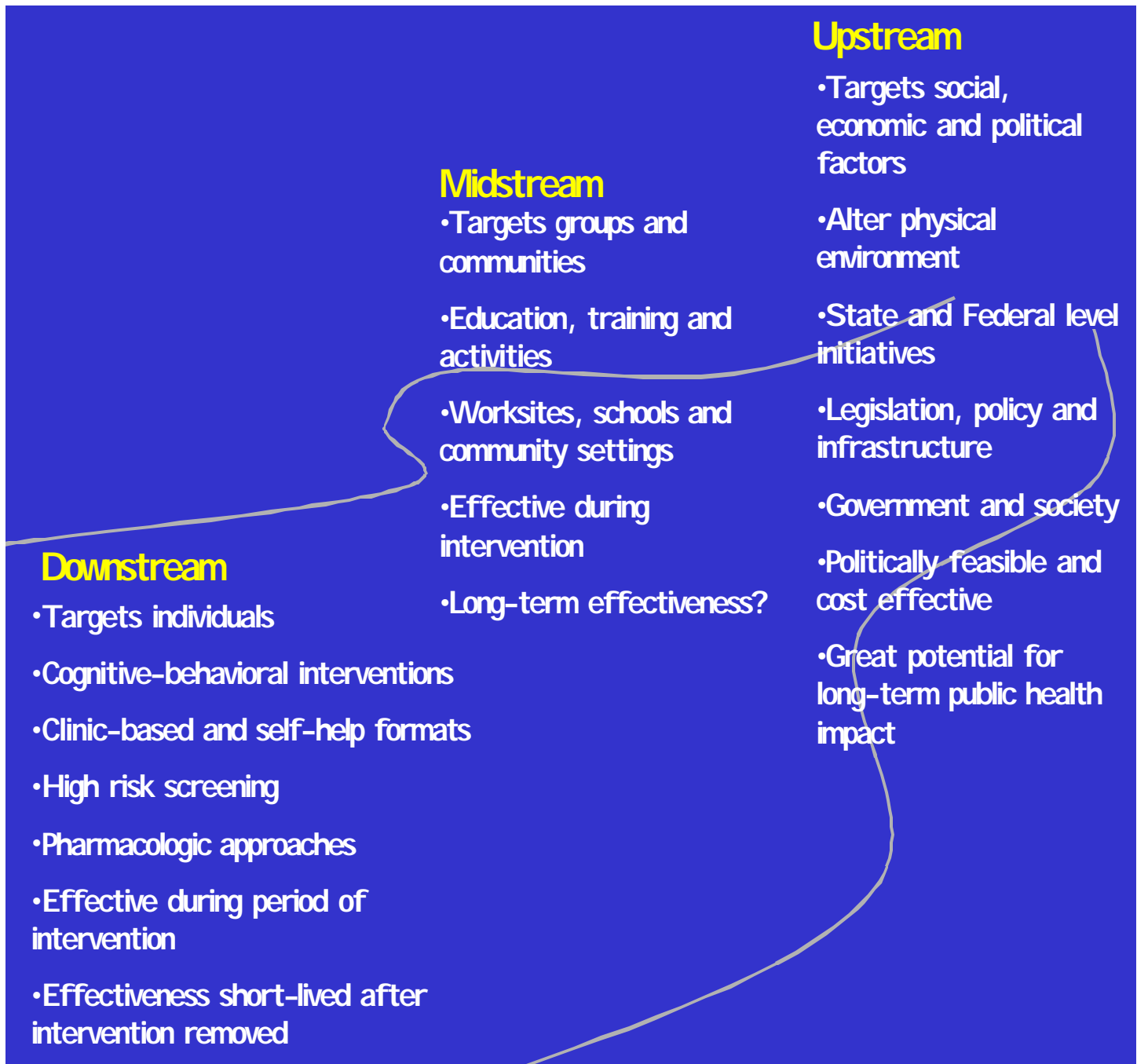
Wagner, E. (2002, August). Closing the quality chasm for the chronically ill. Presentation at the Policy Academy on Chronic Disease Prevention and Management, San Francisco, CA.

Photos:

Healthy Lifestyles—DHSS

Early Detection—National Cancer Institute

APPENDIX I— INTERVENTION APPROACHES OR “STREAMS”



APPENDIX I (CONTINUED)— INTERVENTION APPROACHES OR “STREAMS” EXAMPLES

	Downstream	Midstream	Upstream
Tobacco Control	<ul style="list-style-type: none"> • Medical advise to quit smoking • Clinic based stop smoking programs • Self-help quit smoking techniques • Nicotine gum / patches • Nicotine inhalers / nasal sprays 	<ul style="list-style-type: none"> • School-based tobacco use prevention programs • Worksite interventions that combine individual treatments with formal non-smoking policies • Implementation of clinical practice guidelines on smoking cessation • Health system changes to provide feedback on health damage or risk from tobacco use 	<ul style="list-style-type: none"> • Comprehensive state-based tobacco use prevention and control programs • Statewide media campaigns • Federal tobacco control legislation • Increasing the price of tobacco • Medicaid, Medicare and other insurance reimbursement for tobacco cessation treatments • Restrictions on smoking in public places • Prohibiting sales to minors
Physical Activity	<ul style="list-style-type: none"> • Behavioral counseling and contracting • Self-help materials • Clinical exercise interventions • Exercise training • Incentives/contests • Goal setting • Home-based activity programs (e.g., treadmills) • Buddy programs 	<ul style="list-style-type: none"> • Workplace physical activity campaigns • Mass media campaigns • Community events that target entire communities • Involving community leaders in physical activity campaigns • Modifying school physical education classes—active curriculum, staff in-service training and onsite follow-up 	<ul style="list-style-type: none"> • Insurance coverage for athletic facility membership and physical counseling • Environmental changes—bike paths, safe walking areas, and building codes requiring centrally located stairwells • Tax incentives for physically active people • Involving state leaders in physical activity campaigns
Healthy Eating	<ul style="list-style-type: none"> • Case finding, counseling and monitoring individuals with elevated blood cholesterol • Counseling to reduce dietary fat intake • Therapeutic diets for chronic disease management • Self-help interventions to promote healthy eating • Print dietary guides • Pharmacologic interventions 	<ul style="list-style-type: none"> • Nutrition information programs in restaurants, grocery stores, etc. • Worksite nutrition programs such as health foods in vending machines • School-based programs including classroom instruction and food service changes • Risk reduction information in medical settings • Computerized interactive programs with tailored diet messages 	<ul style="list-style-type: none"> • Federal policies on ingredient and nutrient labeling requirements • Increasing access to healthy foods in geographic regions • Reimbursement for nutrition counseling and greater emphasis in medical education • Increasing the price of unhealthy foods

APPENDIX II—CHRONIC DISEASE RISKS IN MISSOURI

Many chronic diseases are often preventable if life-style habits are changed. Seven simple steps can add years to a person's life:

- avoiding tobacco use
- regular physical activity
- eating five servings of fruits and vegetables daily
- controlling weight
- obtaining health screenings at recommended intervals
- blocking skin exposure to the sun
- staying active in the community

Risk factors for illness and premature death are an increasing challenge in Missouri. The following data provides some insight to Missouri's current chronic disease risk factors status:

• **Smoking**

- ✓ Each day in Missouri, smoking causes more than 28 deaths.
- ✓ In 2001, over one-fourth (25.9%) of Missouri adults and almost one-third (30.3%) of high school students smoked. In addition, one in six middle school students reported current smoking in 1999.
- ✓ Missouri's high smoking rates contribute to the state's ranking well above the U.S. average for such smoking-related health problems as heart disease, cancers, emphysema, and low-birth-weight infants.
- ✓ Health care expenditures that are attributed to tobacco use in Missouri account for over \$1.6 billion annually. Approximately \$415 million of this amount is in Medicaid costs.

• **Overweight and Obesity**

- ✓ Obesity, at 22.1% of Missouri adults in 2000, is considered to be at epidemic proportions.
- ✓ In 2000, Missouri ranked 10th in the prevalence of obesity in the United States.
- ✓ Over one-half of all adults in Missouri are either overweight or obese.

• **Physical Inactivity**

- ✓ In 2000, the prevalence of physical inactivity in Missouri adults (28.8%) was 16th highest in the nation.
- ✓ Regular physical activity reduces heart disease; decreases the risk for colon cancer, diabetes, high blood pressure and falls among the elderly; helps to control weight; helps to relieve pain of arthritis; and reduces symptoms of anxiety and depression.

• **Nutrition**

- ✓ In 2000, only 20.7% of Missouri adults reported eating 5 or more servings of fruits and vegetables per day.
- ✓ The intake of 5 fruits and vegetables daily was even less among Missouri African-Americans at 14.9%.

• **Other factors contributing to high rates of chronic diseases among Missouri adults include:**

- ✓ 6.7% have diabetes
- ✓ 7.3% have asthma
- ✓ 25.0% have high blood pressure
- ✓ 34.3% have not had blood cholesterol checked within past five years
- ✓ 37.0% are affected with arthritis
- ✓ 66.1% of colon cancers are detected late

Improving the health of Missourians will require a focus on prevention in addition to treatment to impact the health of the whole population. Effective prevention programs will be the most cost-effective investment in terms of reducing costly treatment, improving and sustaining quality of life, reducing lost work time and reducing long-term care needs.

Missouri's plan to reduce chronic diseases focuses on reducing key risk factors, increasing preventive practices, improving chronic care management and enhancing state policies that would improve health outcomes.

APPENDIX III— TRACKING PROGRESS IN HEALTHY LIFESTYLES

Data on public health indicators are most useful if collected over time. This allows determination of whether public health interventions are effective, how much has been accomplished and how fast outcomes are being achieved.

The table below shows the long-term success indicators that the Missouri Department of Health and Senior Services will use to measure progress. Annual targets to 2005 represent objectives that we have set for each success indicator. We also include Healthy People targets for the year 2010 to show how Missouri currently compares to the nation's health objectives.



Long-term Success Indicators	Healthy People 2010	2000 Baseline	2001 Update	2002 Target	2003 Target	2004 Target	2005 Target
Percent of adult current smokers	12.0	27.2	25.9	25.8	25.7	25.6	25.4
Percent of students grades 9-12 who smoked cigarettes on one or more of the past 30 days	16.0	32.8	30.3	30.3	30.3	30.3	30.3
Percent of pregnant women who report smoking during pregnancy	2.0	18.3	16.8	15.7	15.7	14.6	13.5
Percent of overweight adults (BMI 25-29.9 kg/m ²)	**	34.4	36.2	33.7	33.4	33.1	32.7
Percent of obese adults (BMI ≥ 30 kg/m ²)	15.0	22.1	23.2	21.7	21.5	21.3	21.0
Percent of students grades 9-12 who are overweight	**	*	12.8	*	12.4	*	12.0
Percent of adults who report no leisure time physical activity during past month	20.0	28.8	27.5	26.1	24.8	23.6	22.4
Percent of adults consuming 5 or more fruits and vegetables daily	**	20.7	*	21.7	*	22.8	*
Percent of students grade 9-12 consuming 5 or more fruits and vegetables daily	**	18.3 (1999)	18.7	*	19.6	*	20.0

*Data not available.

**No comparable 2010 objective or uses different data source.

APPENDIX IV—TRACKING PROGRESS IN IMPROVING EARLY DETECTION AND CHRONIC DISEASE CARE MANAGEMENT

Measures are an important part of our efforts to improve care. They tell us whether an intervention we implement actually leads to improvement. Although the majority of the measures in the table below are intermediate measures, because they represent behavior changes, it is through these activities that diseases are detected early. Early diagnosis and intervention can reduce the burden of chronic disease and promote the best chance of cure, when a cure is possible and reduce secondary disease complications when a cure is not possible. Periodic screenings at proper intervals along with good lifestyle habits greatly improve a person's chance of preventing chronic diseases.



Intermediate Success Indicators	Healthy People 2010	2000 Baseline	2001 Update	2002 Target	2003 Target	2004 Target	2005 Target
Percent of adults having blood pressure checked within the past year	**	87.0 (1999)	*	*	87.5	*	88.0
Percent of adults having blood cholesterol checked within the past five years	80.0	65.7 (1999)	72.4	*	76.0	*	80.0
Percent of adults (age 50 and over) who ever had a sigmoidoscopy or colonoscopy for colon cancer screening	50.0	37.5 (1999)	43.0	*	45.0	*	50.0
Percent of women (age 50 and over) who have had a mammogram and breast exam in the past two years	**	65.8	*	66.5	*	68.3	69.1 (2006)
Percent of adults with diabetes who monitor their blood glucose one or more times per day	60.0	50.9	*	51.5	*	52.5	53.5 (2006)
Percent of patients with diabetes receiving: <ul style="list-style-type: none"> Two or more A₁C tests per year Annual dilated eye exams Annual comprehensive foot exam 	** 75.0 75.0	69.7 67.9 63.1	*	*	*	*	75.0 75.0 75.0

*Data not available.

**No comparable 2010 objective or uses different data source.